



FLAT SHANK

E2492 SERIES

FLAT SHANK

EQ492 SERIES

HSSCo8, 2 FLUTE LONG LENGTH BALL NOSE

- HSSCo8, 2 SCHNEIDEN LANG STIRNRADIUS
- Fraise HSSCo8, 2 dents, hémisphérique, longue
- 2 TAGLIENTI, SEMISFERICA, SERIE LUNGA - HSSCo8



HSS Co8
DIN 1889
2
30°
R ±0.02
DIN 1835B
P.742~743

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	
						UNCOATED
E2492020	EQ492020	R1.0	2.0	6	7	54
E2492030	EQ492030	R1.5	3.0	6	8	56
E2492040	EQ492040	R2.0	4.0	6	11	63
E2492050	EQ492050	R2.5	5.0	6	13	68
E2492060	EQ492060	R3.0	6.0	6	13	68
E2492070	EQ492070	R3.5	7.0	10	16	80
E2492080	EQ492080	R4.0	8.0	10	19	88
E2492090	EQ492090	R4.5	9.0	10	19	88
E2492100	EQ492100	R5.0	10.0	10	22	95
E2492110	EQ492110	R5.5	11.0	12	22	102
E2492120	EQ492120	R6.0	12.0	12	26	110
E2492130	EQ492130	R6.5	13.0	12	26	110
E2492140	EQ492140	R7.0	14.0	12	26	110
E2492150	EQ492150	R7.5	15.0	12	26	110
E2492160	EQ492160	R8.0	16.0	16	32	123
E2492170	EQ492170	R8.5	17.0	16	32	123
E2492180	EQ492180	R9.0	18.0	16	32	123
E2492190	EQ492190	R9.5	19.0	16	32	123
E2492200	EQ492200	R10.0	20.0	20	38	141
E2492220	EQ492220	R11.0	22.0	20	38	141
E2492240	EQ492240	R12.0	24.0	25	45	166
E2492250	EQ492250	R12.5	25.0	25	45	166
E2492260	EQ492260	R13.0	26.0	25	45	166
E2492280	EQ492280	R14.0	28.0	25	45	166
E2492300	EQ492300	R15.0	30.0	25	45	166

- ▶Other shank design on your request.
- ▶TiN and TiCN Coatings are available on your request.

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ - 0.03	h6

◎ : Excellent ○ : Good

ISO Material Description	P											M			K					
	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron	Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO Material Description	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)		Non Metallic Materials			Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron			
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎



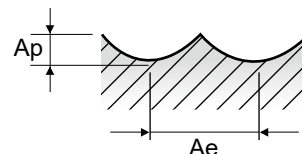
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

E2535, E2492 SERIES 2 FLUTE BALL NOSE

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)									
						3.0	4.0	6.0	8.0	10.0	12.0	16.0	20.0	25.0	
P	1	Non-alloy steel	0.7D	0.3D	Vc	40	40	40	40	40	40	40	40	40	40
					fz	0.011	0.018	0.031	0.05	0.069	0.085	0.094	0.117	0.13	
					RPM	4244	3183	2122	1592	1273	1061	796	637	509	
	2		Vc	30	30	30	30	30	30	30	30	30	30	30	
			fz	0.01	0.017	0.026	0.044	0.06	0.066	0.083	0.085	0.088			
			RPM	3183	2387	1592	1194	955	796	597	477	382			
	3-4		Vc	20	20	20	20	20	15	20	20	15			
			fz	0.008	0.013	0.023	0.036	0.054	0.061	0.079	0.083	0.091			
			RPM	2122	1592	1061	796	637	398	398	318	191			
	5		Vc	15	15	15	15	15	10	15	15	15			
			fz	0.007	0.013	0.018	0.03	0.044	0.055	0.07	0.088	0.094			
RPM		1592	1194	796	597	477	265	298	239	191					
6	Vc	30	30	30	30	30	30	30	30	30	30				
	fz	0.01	0.017	0.026	0.044	0.06	0.066	0.083	0.085	0.088					
	RPM	3183	2387	1592	1194	955	796	597	477	382					
7	Vc	20	20	20	20	20	15	20	20	15					
	fz	0.008	0.013	0.023	0.036	0.054	0.061	0.079	0.083	0.091					
	RPM	2122	1592	1061	796	637	398	398	318	191					
8-9	Vc	15	15	15	15	15	10	15	15	15					
	fz	0.007	0.013	0.018	0.03	0.044	0.055	0.07	0.088	0.094					
	RPM	1592	1194	796	597	477	265	298	239	191					
10	Vc	30	30	30	30	30	30	30	30	30					
	fz	0.01	0.017	0.026	0.044	0.06	0.066	0.083	0.085	0.088					
	RPM	3183	2387	1592	1194	955	796	597	477	382					
11.1	Vc	15	15	15	15	15	10	15	15	15					
	fz	0.007	0.013	0.018	0.03	0.044	0.055	0.07	0.088	0.094					
	RPM	1592	1194	796	597	477	265	298	239	191					
N	21-22	Aluminum-wrought alloy	0.7D	0.3D	Vc	105	100	105	100	100	95	100	100	100	
					fz	0.01	0.016	0.025	0.044	0.056	0.068	0.075	0.088	0.096	
					RPM	11141	7958	5570	3979	3183	2520	1989	1592	1273	
23-24	Aluminum-cast, alloyed	0.7D	0.3D	Vc	68	65	68	65	65	62	65	65	65		
				fz	0.01	0.016	0.025	0.044	0.056	0.068	0.075	0.088	0.096		
				RPM	7215	5173	3608	2586	2069	1645	1293	1035	828		

※The FEED, in long & extra long types, should be reduced by around 50%



SELECTION GUIDE



MILLING TOOLS

SERIES	E9410	E9720	E3570	E3574
FLUTE	2	Muti Flute	2	4
HELIX ANGLE	≈ 30°	30°	≈ 30°	≈ 30°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE
SIZE MIN	D3.0	D6.0	D2.5	D2.0
SIZE MAX	D25.0	D30.0	D18.0	D18.0
PAGE	678	679	680	681

CBN
END MILLS

i-Xmill
END MILLS

i-SMART
MODULAR
END MILLS

X5070
END MILLS

4G MILL
END MILLS

X-POWER
PRO
END MILLS

TitaNox-
POWER
END MILLS

JET-POWER
END MILLS

V7 PLUS
END MILLS

ALU-POWER
HPC
END MILLS

ALU-
POWER
END MILLS

D-POWER
GRAPHITE
END MILLS

D-POWER
CFRP
END MILLS

ROUTERS

CRX S
END MILLS

K-2
END MILLS

ONLY ONE
COATED PM60
END MILLS

TANK-
POWER
END MILLS

GENERAL
HSS
END MILLS

MILLING
CUTTERS

TECHNICAL
DATA

HSS
GENERAL HSS
END MILLS

General Purpose, Non-coated, Any Coating Available



Please visit
globalyg1.com/mat
for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P 738

SHORT LENGTH	SHORT LENGTH ROUGHING	SHORT LENGTH	SHORT LENGTH
Uncoated / TiAIN	Uncoated / TiAIN	Uncoated / TiAIN	Uncoated
HSS-PM	HSS-PM	HSS-PM	HSS-PM



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc					
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎	◎	◎	◎	
	2		About 0.45% C Annealed	190	13	◎	◎	◎	◎	
	3		About 0.45% C Quenched & Tempered	250	25	◎	◎	◎	◎	
	4		About 0.75% C Annealed	270	28	◎	◎	◎	◎	
	5		About 0.75% C Quenched & Tempered	300	32	○	○	○	○	
	6	Low alloy steel	Annealed	180	10	◎	◎	◎	◎	
	7		Quenched & Tempered	275	29	◎	◎	◎	◎	
	8		Quenched & Tempered	300	32	○	○	○	○	
	9		Quenched & Tempered	350	38	○	○	○	○	
	10		High alloyed steel, and tool steel	Annealed	200	15	◎	◎	◎	◎
	11			Quenched & Tempered	325	35	○	○	○	○
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15					
	13		Martensitic Quenched & Tempered	240	23					
	14		Austenitic	180	10					
K	15	Grey cast iron	Pearlitic / ferritic	180	10					
	16		Pearlitic (Martensitic)	260	26					
	17	Nodular cast iron	Ferritic	160	3					
	18		Pearlitic	250	25					
	19		Ferritic	130						
20	Malleable cast iron	Pearlitic	230	21						
N	21	Aluminum-wrought alloy	Not Curable	60		○	○	○	○	
	22		Curable Hardened	100		○	○	○	○	
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		○	○	○	○	
	24		≤ 12% Si, Curable Hardened	90		○	○	○	○	
	25		> 12% Si, Not Curable	130		○	○	○	○	
	26		Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110					
	27	Non Metallic Materials	CuZn, CuSnZn (Brass)	90						
	28		CuSn, lead-free copper and electrolytic copper	100						
	29		Duroplastic, Fiber Reinforced Plastic							
	30	Rubber, Wood, etc.								
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15					
	32		Cured	280	30					
	33		Annealed	250	25					
	34		Cured	350	38					
	35	Cast	320	34						
	36	Titanium Alloys	Pure Titanium	400 Rm						
	37		Alpha + Beta Alloys Hardened	1050 Rm						
H	38	Hardened steel	Hardened	550	55					
	39		Hardened	630	60					
	40	Chilled Cast Iron	Cast	400	42					
	41	Hardened Cast Iron	Hardened	550	55					

E3462	E2535	E2492	E2512	E2410	E2429	EL623	EL612	E2570	E2571	E2510
3	2	2	3	4&6	4&6	1	1	2	2	2
60°	≈ 30°	≈ 30°	30°	30°	30°	≈ 30°	≈ 30°	≈ 30°	≈ 30°	30°
SQUARE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE
D7.0	R1.0	R1.0	R1.0	R3.0	R5.0	D3.0	D3.0	D1.0	D1.5	D2.5
D20.0	R16.0	R15.0	R3.0	R12.5	R12.5	D10.0	D10.0	D40.0	D40.0	D40.0
682	683	684	685	686	687	688	689	690	693	695
SHORT LENGTH	SHORT LENGTH	LONG LENGTH	SHORT LENGTH THROW AWAY	SHORT LENGTH	LONG LENGTH	-	-	SHORT LENGTH	LONG LENGTH	EXTRA LONG LENGTH
Uncoated / TiAIN	Uncoated / TiAIN	Uncoated / TiAIN	Uncoated / TiAIN	Uncoated / TiAIN	Uncoated / TiAIN	Uncoated	Uncoated	Uncoated / TiAIN	Uncoated / TiAIN	Uncoated / TiAIN
HSS-PM	HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS-E	HSS-E	HSS Co8	HSS Co8	HSS Co8
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CBN
END MILLS

i-Xmill
END MILLS

i-SMART
MODULAR
END MILLS

X5070
END MILLS

4G MILL
END MILLS

X-POWER
PRO
END MILLS

TitaNox-
POWER
END MILLS

JET-POWER
END MILLS

V7 PLUS
END MILLS

ALU-POWER
HPC
END MILLS

ALU-
POWER
END MILLS

D-POWER
GRAPHITE
END MILLS

D-POWER
CFRP
END MILLS

ROUTERS

CRX S
END MILLS

K-2
END MILLS

ONLY ONE
COATED PM60
END MILLS

TANK-
POWER
END MILLS

GENERAL
HSS
END MILLS

MILLING
CUTTERS

TECHNICAL
DATA